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## Measuring the economic performance in decision making process in the contemporary economies

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### Abstract

Analysing and measuring the economic performance of a company represents a complex process, taking into account that it is the result of a sum of factors by means of which the company is related to the environment, observing the way to obtain capital gain. The present paper presents an analysis of involving the information in setting a system of evaluating the performances and corporate decision making within the companies, for a sample of 168 companies in Prahova County.

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### 1. Introduction

The economic performance is a basic element in strengthening the competitive economic field specific to contemporary market economies (Morales and Gassie-Falzone, 2014). Understanding and appreciating the economic performance is not possible without a proper informational base, taking into account that the main

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coordinates come from the costs analysis and management system. Achieving the economic targets imposes the company to obtain a combination of the input as best as possible so that the achievement of the economic results requires a reduced usage of factors further transposed into a proper level of the production costs (Glac, 2014).

Acting in order to value the economic potential, the companies act in an environment hostile most of the times (Gander, 2014), that imposes them a permanent adjustment to the numerous and various changes that take place and produce within an uncertain business environment marked by contradictions of different nature, legal, fiscal, or economic (Nica, 2014). The frailty of the business environment imposes a careful investigation of the setting mechanisms and influencing factors that are responsible for the uncertainty. Knowing the information necessary to a proper and relevant adjustment is one of the main targets of the decision-making business system (Jørgensen and Rutgers, 2014). Thus, setting an informational system of the managerial type able to supply not only support to the economic decision but also the possibility of a perspective of action became a necessity for all the modern companies.

In this regard, some authors such as (Oprea, 2005) consider that most of the times the informational system for leading is the same with the economic informational system, that is "a set of human and capital resources, invested in a company in order to collect and process data necessary to produce the information, that will be used at all decision-making levels of the administration and control of the organization activities." (Oprea, 2005)

On the other hand, there are opinions according to which Lungu C. I. (2007) the information necessary to users depends on the action priorities, interest in a certain situation or users' experience.

The relevance and viability of the information that the company gets at a certain moment offer a wide action margin in a field of the economic decision possibilities that the company has to adjust to in the context of economic uncertainty (Nica and Potcovaru, 2014).

## 2. Approaches regarding the type of the information used in the system of evaluating the performances

The necessity to obtain and analyze the information necessary for appreciating the level of performance of an economic structure is imposed by evaluating the changes of the potential and intermediate states of the used and raised economic resources (Boling et al., 2014), controlled by the entity in the future as well as for anticipating the capacity to generate cash flows from the existing resources, for expressing the reasons about the efficiency that the entity can hire and use new resources (Popescu, 2014).

Most of the times, the financial decision is based on the previous financial situations, which most of the times do not reflect the intermediate changes imposed by the external environment of the company. Thus, as (Hlaciuc E., Mihalciuc C., 2006) appreciate, the annual financial situations represent the basic form in publishing the accounting information, having as a target to offer information referring to the financial position, performance and cash flows of a company useful to a large range of uses in making the economic decisions (Hlaciuc E., Mihalciuc C., 2006).

The information of the cost type must be considered tools for creating value at a lower cost. Also, this action shows the capacity of the informational system of the costs to supply relevant information that serve several purposes such as (Budugan D. et al., 2007):

- using it in financial accountability (acquisition cost, production cost or processing stocks, full cost, selling cost and period cost);
- using it in making decisions (opportunity cost, relevant cost, irreversible cost);
- appreciating (measuring) and managing the information (hidden costs, controllable costs, externalities) (Budugan D. et al., 2007)

Most of these costs affect the quality of the sold products, company image and its performance. As a result, they are very important for the company management in making the best decisions.

Jianu I. (2007) appreciates that performance is a competitive state of the company that guarantees its stable presence on the market. Performance is a mark of a potential of future results, appeared as a consequence of achieving strategically objectives, and it always refers to the future. The effective company is that one which creates value for the shareholders, pleases customers, pays attention to its employees and respects the natural environment.

In this respect, the specialized literature appreciates that the financial information is limited and cannot depict all the faces of the performance, is not a support for forecasting the activities of the companies (Williams, 2014). In order to appreciate the value of a company, the investors must be able to appreciate its capacity to create long term

advantages. This is possible by studying some non-financial indicators.

Studies in the specialized literature such as (Niven P. R., 2002) prove that the investors use at least 35% non-financial information in making decisions and the companies based only on a financial pattern have a lower performance than those which use also non-financial indicators .(Niven P. R., 2002).

### 3. Methodology of research

In order to validate the theoretical studies regarding the subject approached in this article, we made a poll on a sample of 169 companies in Prahova county. We made an analysis of processing data, that viewed the confirmation of the suppositions and a dissemination of the obtained results. There were expressed general theories and statistics regarding the subject of research, these being tested by using the  $\chi^2$  test. The studied collectivity was represented by the managers of some companies in Prahova County.

We made an empirical study; the data were collected from questionnaires, on a sample of companies from seven important fields of activity: agriculture and primary industry, manufacturing industry, IT& C, commerce, services, building etc. We also divided the companies on size criteria: micro-enterprises, small, medium-sized, large and very large enterprises.

The studied collectivity was represented by the managers of some companies form Prahova county. The survey was based on a sample of 168 companies in Prahova county between September-December 2009. The analysis of the results of the processed data took into account checking the assumptions and disseminating the obtained results. General theories and statistics regarding the researched subject were expressed, they being tested by using the  $\chi^2$  test, according to:

$$\chi^2_{\text{calc}} = \sum_{i=1}^5 \sum_{j=1}^4 (n_{ij} - n^*_{ij})^2 / n^*_{ij} \quad (1)$$

with

$$n^*_{ij} = (N_{i0} * N_{0j}) / N \quad (2)$$

The decision law:

-if  $\chi^2_{\text{calc}} < \chi^2$  theoretically , then x, y are independent

- if  $\chi^2_{\text{calc}} \geq \chi^2$  theoretically , then x, y are dependent.

The values of the  $n^*_{ij}$  are shown in Appendix!

This means that the types of information more often used in the system of evaluating performances and setting the decisions within companies are not influenced by the type of company. Establishing the relative frequencies regarding the types of information more often used in the system of evaluating performances and setting the decisions within companies is presented in the table

The assumptions of research tested by this study were the following:

1. Within the system of evaluating the performances and setting the decisions in your company, which types of information do you use more often:

- 1.1 Information regarding costs
- 1.2 Information regarding profitability of products
- 1.3 Information regarding profitability of customers
- 1.4 Information regarding the performances of the employees
- 1.5 Market research

2. Does the present economic situation have an impact on the activity in your company?

- 2.1 Yes
- 2.2 No

If it has, of which type?

- 2.1.1 Falling of sales
- 2.1.2 Increasing total costs
- 2.1.3 Increasing the purchasing costs
- 2.1.4 Higher costs of production
- 2.1.5 Financial difficulties
- 2.1.6 Low access to funds
- 2.1.7 Others (please, mention which ones).....

#### 4. The study results

From the total of the 168 studied companies, their structure on size criteria was the following: 83 micro-enterprises, 48 small-sized enterprises, 24 medium-sized enterprises, and 13 large enterprises. Their structure on activity field is represented as follows: 4 companies from the field of Agriculture and primary industry, 26 manufacturing companies, 9 IT & C companies, 41 trading companies, 44 building companies, 31 service companies and 13 from others.

Taking into account the categories of information used in the system of evaluating performances and setting the decisions within companies: information regarding costs, profitability of products, profitability of customers, profitability of the employees, market research, this was analysed on the size of the companies: micro-enterprises, small, medium-sized and large enterprises. The results are shown in the table 1.

Table 1. Types of information used in evaluating the company performances

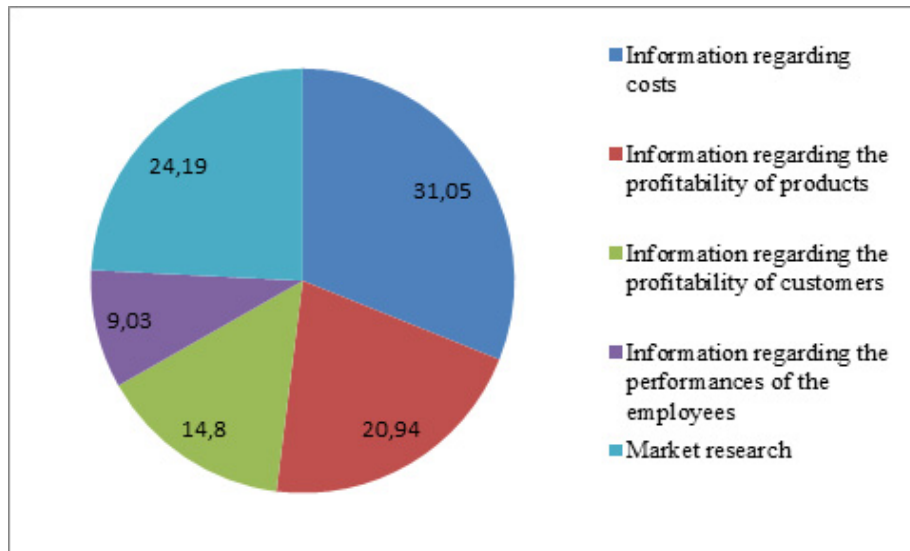
	Type of company				Total N <sub>10</sub>
	Micro-enterprises	Small	Medium-sized	Large	
0	1	2	3	4	5
Information regarding costs	33 35,39	35 32,81	10 10,25	8 7,45	86
Information regarding profitability of products	25 23,87	19 22,19	7 6,91	7 5,03	58
Information regarding profitability of customers	22 16,88	16 15,69	1 4,88	2 3,55	41
Information regarding the performances of the employees	8 10,29	11 9,57	4 2,98	2 2,16	25
Market research	26 27,57	25 25,64	11 7,98	5 5,81	67
Total N <sub>0j</sub>	114	106	33	24	277

Source: authors' own computations

Considering the level of signification  $\alpha = 0,05$  and the number of free angles:  $l=(5-1)*(4-1)=12$  it shows that  $\chi^2_{\text{theoretically}} = \chi^2_{0,05; 12} \Rightarrow$  for 0,05 percentile which is used in the table of variable  $\chi^2$  is 0,95  $\Rightarrow \chi^2_{0,95; 12} = 21,0$ .

$\chi^2_{\text{calc}} = 9,38 < 21 = \chi^2_{0,95; 12} \Rightarrow x, y$  independent.

The importance of the categories of information more often used in the system of evaluating performances and setting decisions within companies is presented in the fig.1:



Source: authors 'own design

Fig.1. Establishing the relative frequencies regarding the types of information more often used in the system of evaluating performances

Among the types of information more often used in the system of evaluating performances and setting decisions within companies, it can be noticed that the higher importance corresponds to the information regarding costs, meaning 31,05 %, followed by the market research with 24,19%, the information regarding the profitability of products with 20,94% is placed on the third position, then the information regarding the profitability of customers with 14,80%, while the information regarding the performances of the employees is of a lower interest, of only 9,03 %. Next it was analysed the distribution of the types of information more often used in the system of evaluating performances and setting decisions within companies, on activity fields:

Table2. The distribution of the types of information more often used in the system of evaluating performances

Types of information used	Fields of activity							Total N <sub>ij0</sub>
	Agriculture, primary industry and manufacturing industry	IT & C	Commerce	Services	Buildings	Other activities		
0	1	2	3	4	5	6	7	
Information regarding costs	14 14,28	1 3,42	26 26,39	22 18,94	17 15,83	6 7,14		86
Information regarding profitability of products	17 9,63	3 2,30	17 17,80	10 12,77	7 10,68	4 4,82		58
Information regarding profitability of customers	2 6,81	1 1,63	13 12,58	11 9,03	9 7,55	5 3,40		41
Information regarding the performances of the employees	3 4,14	4 0,99	8 7,67	6 5,51	2 4,60	2 2,08		25

Market research	10 11,13	2 2,66	21 20,56	12 14,75	16 12,34	6 5,56	67
Total N <sub>0j</sub>	46	11	85	61	51	23	277

Source: authors' own computations

From the data obtained it could be noticed that the companies from the fields of agriculture, primary industry and manufacturing industry use in a higher proportion the information regarding profitability of products, then the information regarding costs, then market research.

IT & C companies use in a higher proportion the information regarding the performances of the employees and that regarding the profitability of products. Most of the studied companies from the commercial field use information regarding costs, then market research, and the least of them use the information regarding the performances of the employees.

Most of the companies from the Constructions and Services sectors use information regarding costs, followed by market research, in a lower proportion that regarding the profitability of customers and products and the least of them use information regarding the performances of the employees. The companies from the sector Other activities use in the same proportion information regarding costs and market research and less the other categories of information.

The table below shows the relative and absolute frequencies of the effects of the present economic situation on the activities of the studied companies:

Table 3 the relative and absolute frequencies of the effects of the present economic situation

The present economic situation has an impact on the activity of your company by:	Absolute frequencies	Relative frequencies (%)
Falling sales	114	44,02
Increasing total costs	23	8,88
Increasing purchasing costs	14	5,41
Higher costs of production	11	4,25
Financial difficulties	60	23,17
Reduced access to funds	33	12,74
Others (please, mention which)....	4	1,54

Source: authors' own computations

The next table presents the values of the effects of the present economic situation on the activities of companies.

From the table 3it can be noticed that falling sales is the effect having the higher value (44,02%) in the present economic situation with an impact on the activity of companies, followed by the financial difficulties with a value of 23,17%, reduced access to funds with 12,74%, increasing total costs in a proportion of 8,88%, increasing purchasing costs with 5,41%, higher production costs with 4,25% and other effects 1,54%. Analysed by fields of activity, the present economic situation has an impact on companies, the greatest value of 24,84% being registered in the field of commerce and services, followed by 18,63% in the field of constructions. The table 4 shows the effects of the kind "falling sales" (114 answers) and "financial difficulties" (60 answers) having values corresponding to the fields of activity:

Table 4: Tthe effects of the kind "falling sales" and "financial difficulties

Sectors		D1	D2	D3	D4	D5	D6	D7	Total
Falling sales	abs.	3	17	6	33	29	17	9	114
	%	2,63	14,91	5,27	28,95	25,44	14,91	7,89	100
Financial difficulties	abs.	1	7	5	14	15	12	6	60
	%	1,67	11,67	8,33	23,33	25	20	10	100

Source: authors' own computations

## 5. Conclusions

The impact of the present economic situation on the activities of a company is expressed with higher values by: falling sales, financial difficulties, reduces access to funds. The higher values regarding the actions meant to counteract the impact of the present economic situation come from reducing expenditure, putting off investments, cutting off employees. In conclusion, costs are important because they reflect the entire activity of a company, that is, based on the information regarding costs managers may decide purchasing, producing, or stopping the production of a certain item; they may manage the existing stock of products; may set the selling costs or identify the need to improve products and manufacturing processes.

## Appendix A. The calculus of the main variables used in the study

$n_{ij}$	$n^*_{ij}$	$n_{ij}-n^*_{ij}$	$(n_{ij}-n^*_{ij})^2$	$(n_{ij}-n^*_{ij})^2 / n^*_{ij}$
0	1	2	3	4
33	35,39	-2,39	5,7121	0,161
35	32,91	2,09	4,3681	0,132
10	10,25	-0,25	0,0625	0,006
8	7,45	0,55	0,3025	0,040
25	23,87	1,13	1,2769	0,053
19	22,19	-3,19	10,1761	0,458
7	6,91	0,09	0,0081	0,001
7	5,03	1,97	3,8809	0,771
22	16,88	5,12	26,2144	1,552
16	15,69	0,31	0,0961	0,006
1	4,88	-3,88	15,0544	3,084
2	3,55	-1,55	2,4025	0,676
8	10,29	-2,29	5,2441	0,509
11	9,57	1,43	2,0449	0,213
4	2,98	1,02	1,0404	0,349
2	2,16	-0,16	0,0256	0,011
26	27,57	-1,57	2,4649	0,089
25	25,64	-0,64	0,4096	0,015
11	7,98	3,02	9,1204	1,142
5	5,81	-0,81	0,6561	0,112
277	277	0	-	9,38

Source: authors' own computations

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